

ABSTRACT

A method of creating a hybridized chip using a top active optical device combined with an electronic chip having electronic chip contacts, when at least some of the active device contacts are not aligned with at least some of the electronic chip contacts, each of the at least some active device contacts having an electrically corresponding electronic chip contact. The method involves creating sidewalls defining openings in the substrate, extending from the first side at the active device contacts to a bottom of the substrate opposite the first side, at points substantially coincident with the active device contacts; making the sidewalls electrically conductive; and connecting the points and the electronic chip contacts with an electrically conductive material. A hybridized chip has at least one top active optical device coupled to an electronic chip, the hybridized chip having been created using a described method. A method of connecting two chips, one of which being a topside active chip, each of the two chips having electrically corresponding contacts to be joined together that are physically mismatched relative to each other. The method involves creating electrically conductive paths on an insulator, each of the electrically conductive paths extending between physical locations of contacts of one of the two chips and physical locations of the electrically corresponding contacts on the other of the two chips.